

RECLAMATION

Managing Water in the West



PROPOSED FISH BARRIER Redfield Canyon Graham County, Arizona

Scoping Information
and
Opportunity to Comment

U.S. Department of the Interior
Bureau of Reclamation
Phoenix Area Office



October 2010

Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

INTRODUCTION

This Scoping Notice/Opportunity to Comment is being offered to the public to allow early and meaningful participation in the National Environmental Policy Act (NEPA) review of a native fish conservation project proposed by the Phoenix Area Office of the Bureau of Reclamation. After the public scoping period has ended, Reclamation will prepare an Environmental Assessment (EA) to evaluate the potential environmental consequences of the proposed action.

The proposed action consists of constructing a fish barrier to protect the existing native fish assemblage in Redfield Canyon, Graham County, Arizona. The barrier would be constructed on land presently owned and administered by the Arizona State Land Department (ASLD), approximately 8.2 miles east of Redington, in Section 36 of Township 11 South, Range 19 East of the Gila and Salt River Baseline and Meridian (Figure 1). Redfield Canyon is a tributary to the San Pedro River and forms part of the middle Gila River Basin.

BACKGROUND

Reclamation's native fish conservation program is mandated by a May 15, 2008 U.S. Fish and Wildlife Service (FWS) biological opinion (BO) that addressed delivery of water through the Central Arizona Project (CAP) and its potential to introduce and spread nonnative aquatic species in the Gila River Basin.¹ A key conservation measure of this BO requires the construction of fish barriers to "prevent or hinder upstream movements of nonindigenous fish and other [nonnative] aquatic organisms into high-value native fish and amphibian habitats" of the Gila River Basin during the 100-year life of the CAP. Redfield Canyon is identified in the BO as one of the high-value streams on which a fish barrier would be emplaced.

Prior to the mid-1900s, habitat destruction and alteration were the principal causes for declines of native fishes in the American southwest. However, in the past several decades, it has become apparent that the presence of nonnative fishes precludes or negates benefits from habitat protection and restoration. Introduction and spread of nonnative fishes now are considered the most consequential factors preventing sustenance and recovery of imperiled native fishes in the Gila River Basin and other drainages of the southwest.

The Redfield Canyon drainage supports a native fish assemblage that consists of speckled dace, longfin dace, Sonora sucker, desert sucker, endangered Gila chub, and recently transplanted endangered Gila topminnow and desert pupfish, and threatened loach minnow spinedace.

¹ The 2008 biological opinion on CAP water transfers to the Gila River basin is available at <http://www.fws.gov/southwest/es/arizona/Biological.htm>.

PURPOSE

The proposed action is needed to meet a key conservation measure of the 2008 BO, which requires a fish barrier in Redfield Canyon “to protect existing populations of Gila chub and Chiricahua leopard frog and facilitate replication of Aravaipa Creek populations of spikedace and loach minnow.” In 2007, the native fish assemblage in Redfield Canyon was supplemented with loach minnow, spikedace, Gila topminnow, and desert pupfish. Construction of the proposed barrier would protect the resident and repatriated² populations of federally listed fishes and Chiricahua leopard frog against potential future upstream invasion of nonnative aquatic organisms from the San Pedro River. Sustaining viable populations of these species in Redfield Canyon would be an important step toward their conservation and recovery.

PROPOSED ACTION

Fish Barrier. Reclamation proposes to acquire a small tract of State Trust Land in Redfield Canyon on which to construct the proposed fish barrier. The tract would need to be of sufficient size to facilitate construction and long-term inspection and maintenance. Acquisition could be accomplished through one of two methods: condemnation or relinquishment.³ Under the condemnation process, ASLD would be paid the appraised fair market value of the land that is acquired. Conversely, under the relinquishment process, a tract of property of similar size and value that is owned by the United States would be exchanged for the desired tract of State Trust Land. There are currently no available lands owned by the United States that the ASLD desires to take in exchange.

The proposed concrete barrier would be constructed in four sections to plug the gaps between three 15- to 20-foot diameter boulders and the canyon walls. Each section would have a minimum 4-foot drop onto a concrete apron. Backfill would be placed along the upstream side of the barrier to prevent impoundment of water. The channel at this location is 78 feet wide and constricted by solid rock walls. The barrier would be designed to withstand forces associated with a 100-year frequency flood.

The proposed site is not accessible by roads or trails. Construction materials and equipment would be staged at a road accessible location on State Trust Land along the south rim of Redfield Canyon. Work crews, materials, and equipment (including a small excavator and/or loader) would be airlifted into the canyon by helicopter. Batched concrete would be delivered by commercial mixer trucks to the staging area, where it would be transferred to a sling-load bucket and transported to the work area by helicopter. Concrete would be placed directly from the sling-load bucket into the formwork of the fish barrier. The land requirement for staging is not expected to exceed

² Repatriation is defined as the intentional release of individuals of a species into an area formerly occupied by that species (Reinart 1991).

³ Reclamation is required to pay the appraised fair market for land it acquires. This requirement precludes submission of bids under the public auction process used by ASLD to sell trust lands.

0.25 acre. Construction would take approximately 6 weeks. Temporary use of State Trust Land for construction staging would require a right of entry from the ASLD.

As an alternative to helicopter transport, the contractor may be permitted to construct a temporary cable tram from the south rim near the staging area to the stream. At least 2 tram towers would be erected to support the cable and trolley. Equipment, material, and possibly batched concrete would be trammed to the worksite. A tram would substantially decrease the need for helicopter support. The tram would be disassembled and removed following construction. The staging area requirement for this option is also estimated to be approximately 0.25 acre. Use of State Trust Land for this staging option would require a right of entry from the ASLD.

Monitoring. A 5-year monitoring program would be established after the fish barrier has been constructed to detect any incursion of nonnative fishes. This monitoring would be funded by Reclamation and developed in cooperation with the Arizona Game and Fish Department and FWS. A lesser monitoring effort would likely continue for the foreseeable future as part of a longer-term native fish recovery program.

ALTERNATIVES TO THE PROPOSED ACTION

Section 102(2)(E) of NEPA requires that no action must be considered as an alternative in an environmental review whenever there are unresolved conflicts about the proposed action with respect to alternative uses of available resources. A description of "no action" is also customarily used in an EA to provide the baseline for comparison of environmental effects of the action alternatives to existing conditions.

In addition to no action and the proposed action, other alternatives to meet the purpose and need will be considered during scoping.

DECISION FRAMEWORK

The Responsible Official for implementing the proposed action is the Area Manager of Reclamation's Phoenix Area Office. The Area Manager must decide whether to authorize the expenditure of funds to implement the proposed action or take no action. If the EA demonstrates that there are no significant effects, the Area Manager would record this determination in a Finding of No Significant Impact and approve funding for acquisition of land and construction of the fish barrier.

PRELIMINARY ISSUES

In accordance with Department of the Interior NEPA regulations at 43 CFR 46.300, Reclamation has determined that an EA is the appropriate level of NEPA compliance to evaluate the potential environmental consequences of the proposed project. NEPA applies to Federal actions; therefore, the first step in determining the scope of the EA is to identify key issues related to the effect of the proposed Federal action on the existing environment. During this initial scoping phase, Reclamation is soliciting input from all

interested persons, organizations, agencies, and Native American Tribes to help identify key environmental issues to be addressed in the EA.

We anticipate the following issues will be addressed in the EA:

- effects to biological resources, including special status species
- effects to cultural resources
- effects to water resources
- effects to fluvial morphology and stream dynamics
- effects to land use, including livestock access

HOW TO COMMENT AND TIMEFRAME

Following a 30-day scoping period, Reclamation will prepare an EA to evaluate the potential environmental consequences of the proposed project. For your comments to be fully considered in the EA, they should be submitted by November 10, 2010. Please include your full name and address and project title (Redfield Canyon Fish Barrier) with your comments. Comments should be submitted to Mr. John McGlothlen, Bureau of Reclamation, 6150 West Thunderbird Road, Glendale, Arizona 85306. Facsimiles may be sent to Mr. McGlothlen at 623-773-6486. Hand-delivered written comments may be submitted to the above address, Monday through Friday, between 7:30 a.m. and 4:00 p.m., excluding Federal holidays. E-mail comments may be submitted to jmcglothlen@usbr.gov.

By law, the names and addresses of those providing comments are available for public review. However, individuals may request that their name and/or address be withheld from the record. These requests will be honored to the extent allowable by law. If you wish your name and/or address withheld, you must state this prominently at the beginning of your comment letter. All comments from organizations or businesses will be available for public inspection in their entirety.

For additional information concerning the proposed project, please contact Mr. McGlothlen at the address above, by telephone at 623-773-6256, or by e-mail.

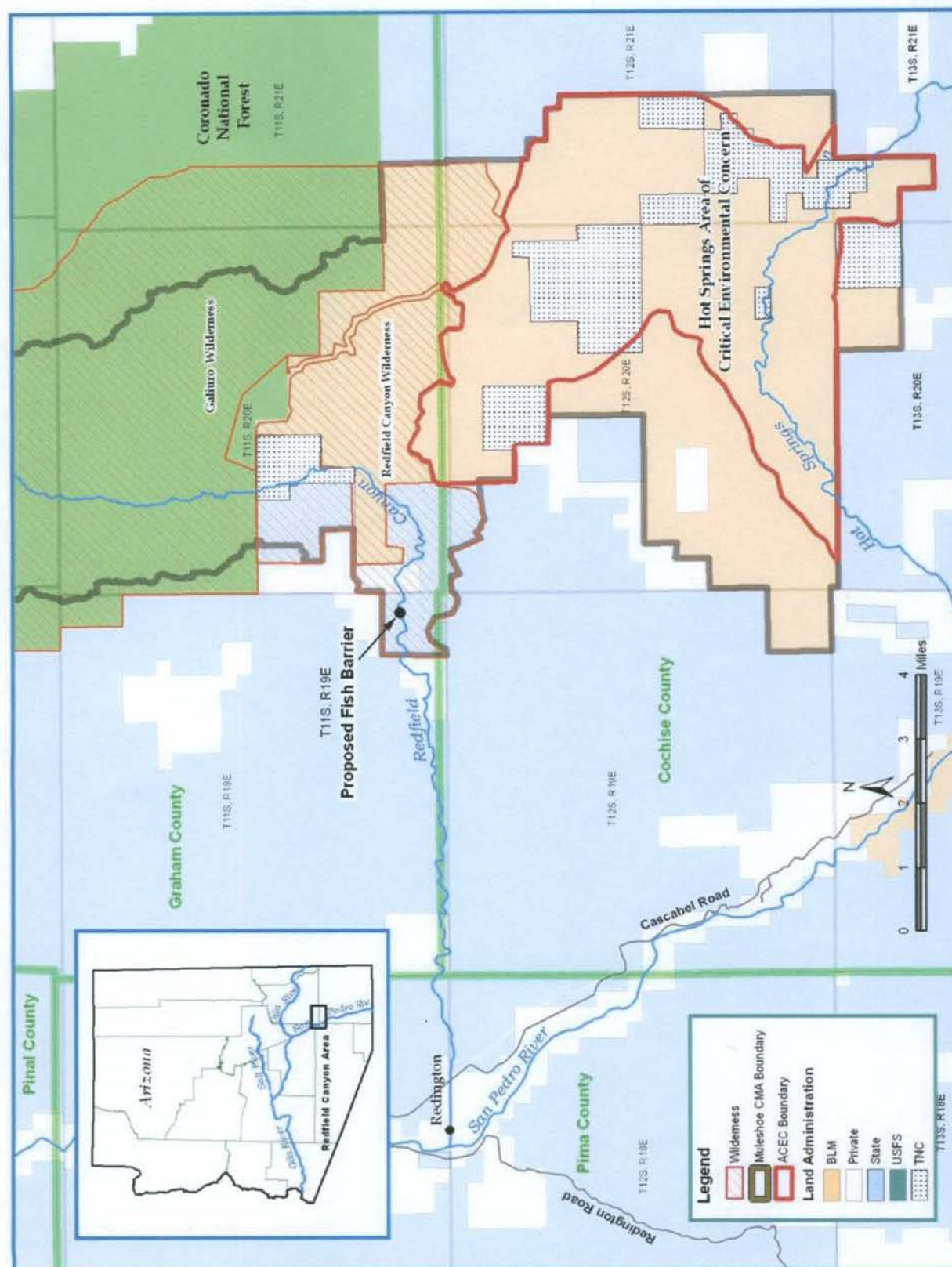


Figure 1. Project location.

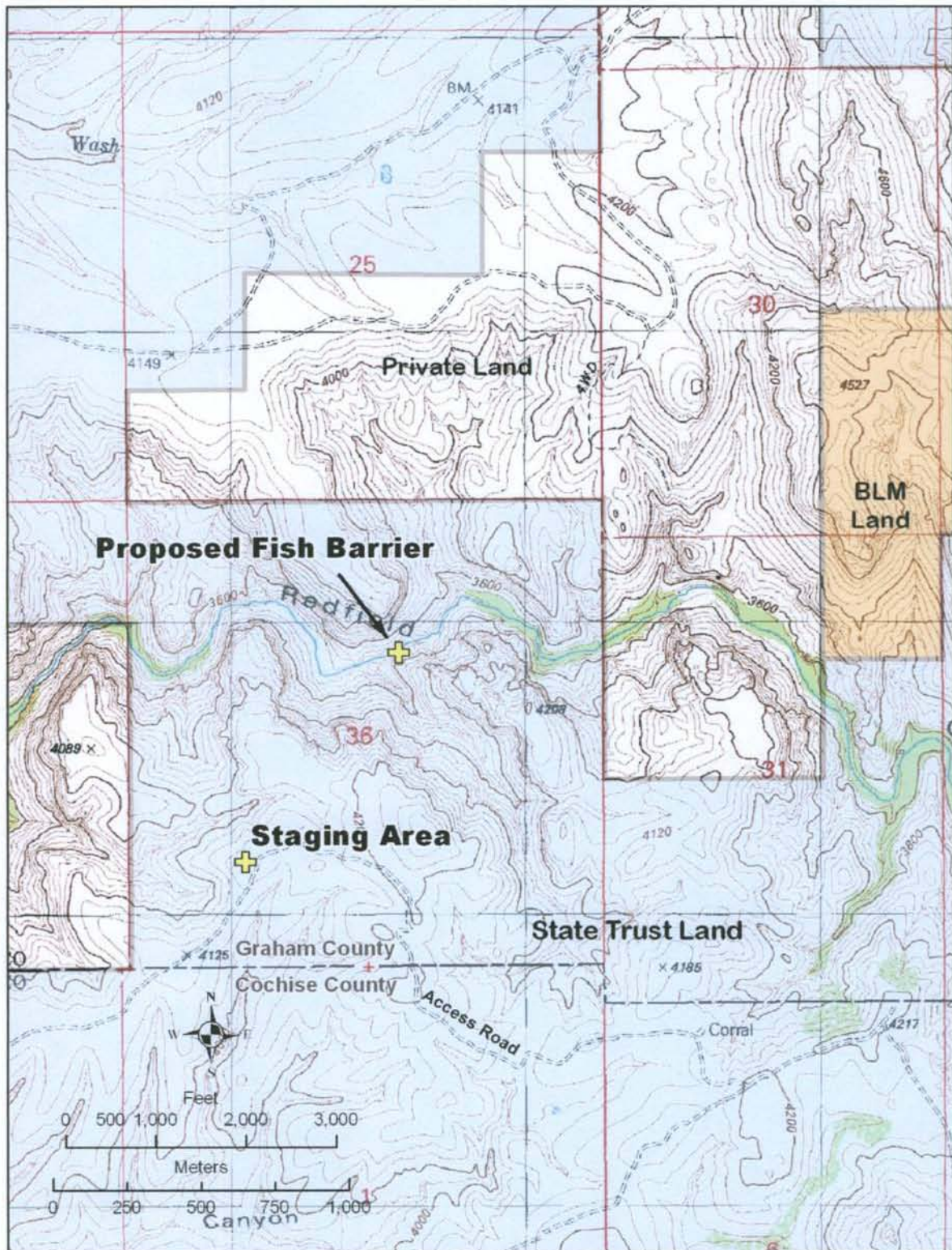


Figure 2. Location of the proposed fish barrier and staging area.